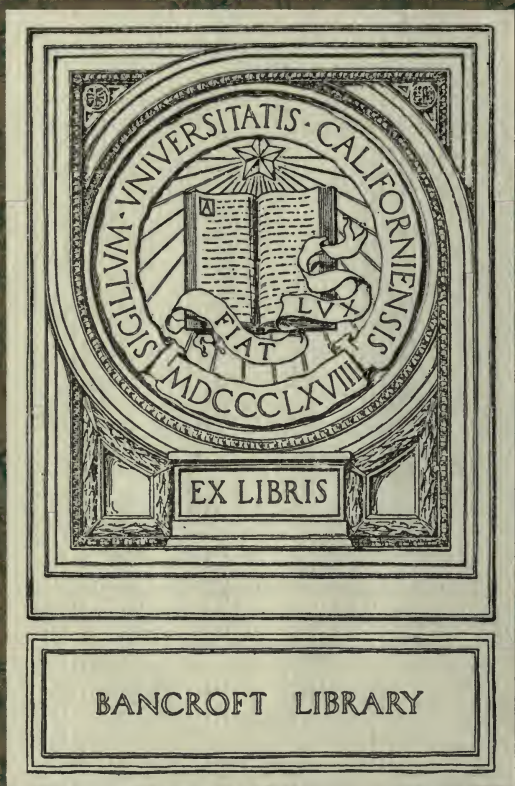


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REPORT ON TRADE CONDITIONS IN ECUADOR

By

CHARLES M. PEPPER

Special Agent of the Department of Commerce and Labor

TRANSMITTED TO CONGRESS IN COMPLIANCE WITH
THE ACT OF FEBRUARY 26, 1907, AUTHORIZING
INVESTIGATIONS OF TRADE CONDITIONS ABROAD

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LETTER OF SUBMITTAL.

GUAYAQUIL, ECUADOR, *January 15, 1908.*

SIR: In submitting the appended Report on Trade Conditions in Ecuador I wish to call attention to the especially favorable prospects which exist for trade with the United States.

Ecuador through its geographical position will be the most directly benefited of the west coast countries of South America by the Panama Canal, and the results of that waterway in the increased volume of commerce seeking this route are already being anticipated at Guayaquil. Fuller benefits will be secured when this wealthy port with its many natural advantages for shipping and its facilities for handling commodities of import and export is protected from the ravages of tropical epidemic diseases by placing it in line with modern scientific sanitation as has been done so successfully at Habana and Panama.

An important means of developing the internal resources of the country is the American Railway extending from the coast across the Andes to the capital. With the means of transportation thus facilitated an increase of commerce should follow, and some indications of this are now apparent. The full effects in providing an outlet for Ecuadorian products and in enlarging the market for goods from abroad ultimately will be shown in the addition to the foreign trade. There is now an interchange of commodities to the approximate value of \$22,000,000 annually. In the actual exchange the balance is in favor of Ecuador. The country is especially favored in the tropical agricultural exports which form the bulk of its exports, for most of them are produced in few other regions and in the face of lowered values of such staple tropical products as coffee are able to command higher prices. This is in particular true of cocoa, or chocolate, which provides more than one-half the total exports.

The products imported comprise textiles, foodstuffs, railway material, electrical and other machinery in small quantities as yet, and a large variety of miscellaneous manufactured articles. The United States supplies its full share of all the imports except in textiles. The cotton piece-goods trade, once almost entirely in American hands, has passed to Manchester.

Financial stability is so important an element in international trade that I have described briefly Ecuador's monetary system, which is maintained on the gold standard and facilitates commercial exchange by the safeguard it affords against violent fluctuations.

Respectfully,

CHARLES M. PEPPER,

Special Agent of the Department of Commerce and Labor.

TO HON. OSCAR S. STRAUS,

Secretary of Commerce and Labor.

TRADE CONDITIONS IN ECUADOR.

ACCESSIBILITY AND RESOURCES.

Ecuador in its geographical relation occupies an advantageous position among the west coast countries of South America. Accessible by Panama and by the Straits of Magellan, its value as a future market for foreign products does not depend so much on ocean transportation facilities as on the addition to its purchasing power through the increase in its natural resources such as cocoa, and by the improvement in the means of communication which will draw isolated districts together and enable them to get their products to the coast and receive imported goods in exchange. That the trade has not advanced more rapidly is due to the slowness with which the obstacles to internal development have been overcome and also to the failure to take advantage of favorable natural conditions.

Though on their face the statistics do not show it, the total foreign commerce of Ecuador for the last five years has ranged approximately from \$18,000,000 to \$22,000,000, the merchandise exports exceeding the imports by from \$2,000,000 to \$2,500,000 annually, with no heavy charges to pay abroad, the chief one being interest on some \$12,000,000 of railway bonds funded into a national debt. This and other remittances, such as to large landowners living in Europe and drawing their incomes from estates in Ecuador probably establish an actual equilibrium. The exportation and importation per capita is difficult to fix with exactness because of the uncertainty as to the number of inhabitants.

AREA AND POPULATION.

The area of Ecuador is usually placed at 116,000 to 119,000 square miles and the population estimated at from 1,300,000 to 1,500,000. The settlement of boundary disputes with neighboring countries would not reduce the area materially. The number of inhabitants is more difficult to arrive at. A partial census was taken by the Government in 1900 and since then the official estimate has been 1,500,000, though the full returns have not been published and some Government publications continue to make estimates of taxation and debt on the assumption of only 1,300,000 inhabitants. This also has been the basis of calculations of the foreign consuls in Ecuador. The most

detailed was that of the British consul at Quito in 1892, who took the countries by districts.

LEADING CITIES.

Wide variations appear in such figures as are obtainable. Quito, the capital, is usually credited with a population of 80,000 and in Spanish colonial times it did have that number. But the Government census taken as recently as 1906 enumerated only 51,000. Allowing 10 per cent of the inhabitants to have escaped enumeration, which is entirely probable from various causes, the population of the capital at the present period would be about 56,000. Guayaquil, on the other hand, shows an increase. In 1890 the population was 45,000 and the census of 1899 gave 60,000. Though the floating population at all times is large, there has been an increase in the permanent residents, as is shown by the large number of new dwellings that have been erected, and Guayaquil at the beginning of 1908 may be said to have from 70,000 to 75,000 inhabitants.

TOWNS AND HAMLETS—RURAL RESIDENTS.

After Guayaquil and Quito the largest town in the Republic is Cuenca, the trade center of the south, whose population is between 35,000 and 40,000. Loja, near the Peruvian border, comes next, and in the north Ibarra is the largest city. Its population, however, does not reach 10,000.

The small number of towns which have more than 5,000 inhabitants is usually the basis for the minimum estimate of a total population not exceeding 1,300,000 for the whole country, but this is misleading. The cereal-raising regions of the Andean plateaus and valleys are well settled and the number of Indian hamlets, each of which groups several hundred persons together, is large. A practical means of judging the number of inhabitants in the interior districts has been afforded during the construction of the Guayaquil and Quito railway. In seeking laborers invariably many more would be found than the apparent number of inhabitants indicated, 500 men often being obtained in districts where from the ordinary indications not more than 200 could be expected. The general manager of the railway, from this experience and other observations, estimates the total population of Ecuador at 1,700,000. The difficulties in securing a correct enumeration of the Indians, through their fear of military conscription, taxes, and unknown harm, are well understood. In view of these difficulties and of the experience of the railway management, the probability is that the population of the farming districts and the interior regions has been underestimated. For the whole country it may be considered as 1,500,000, or about 13 persons per square mile.

TRADE ANALYSIS.

With the foreign commerce in commodities taken as \$22,000,000 this would mean \$14.66 per capita, of which \$6 per capita is imports, as will appear from the figures to be given later. This shows that the bulk of the inhabitants consume little foreign goods, a condition which might be expected of a population so primitive as the native Indians who form the bulk of it. But though a primitive population, the majority are farmers or town laborers, and while they have not yet developed civilized wants in the degree to make them large buyers of foreign goods, the process has begun and its continuance will give importance to Ecuador as a market for manufactured articles.

Ecuador as such a market may be analyzed in Guayaquil, for the trade centers here and the city dominates the commerce of the entire country. It has the advantage of location and this advantage has been utilized to prevent the growth of rival ports so effectively that none of importance exists, though several places have good harbor facilities. Situated on the Guayas River at the head of the Gulf all ocean vessels are able to visit it and freight is received not only for distribution to the interior, but also for the coast towns. The steamship lines from Panama maintain a service which touches at the landings on the north, but the effect in decreasing the importance of Guayaquil by lessening the transshipments is insignificant. Traffic is carried on up the Daule, the Bode, and other tributaries of the Guayas by American paddle-wheel river steamers of 30 to 60 tons capacity, by steam launches of 15 to 20 tons, and by canoes of 15 to 25 tons. Since the building of the railway some change has been made in the routes of transportation to and from the interior, but none of them have deviated from Guayaquil as a starting point or as a terminus, and the city continues both the distributing center for imported goods and for the exportation of the products of the country.

THE COMMERCIAL METROPOLIS.

The relation of Guayaquil to the commerce of Ecuador appears most clearly in the customs-house returns of exports and imports. For the calendar year 1906 the total exports as officially stated were 21,965,000 sucres, or nearly \$11,000,000, and the imports 17,012,000 sucres or \$8,500,000. (The value of the sucre is 48.7 cents, but in reducing in round numbers to dollars 2 sucres may be taken as equal to \$1.) Of the 21,965,000 sucres at which the exports were valued 17,267,000 were through Guayaquil, and of the 17,012,000 sucres of imports 15,768,000 were also through that port. Of the customs duties collected on imports and exports Guayaquil received 6,989,000 in a total of 8,269,000 sucres. In previous years the proportions were about the same.

The substantial monopoly of trade which Guayaquil has held uninterruptedly for many years has made it the wealthiest port on the Pacific in proportion to size and one of the richest cities of the world in proportion to its population. A large amount of capital has been accumulated, the commercial community is a concentrated one, the business being in the hands of a comparatively few strong firms and individuals, and there is usually a surplus of home capital to engage in enterprises which may prove attractive. Yet it is doubtful whether this accumulated capital is performing the service which might reasonably be expected of it. This will appear from a review of the productive resources of Ecuador on which its purchasing power depends.

SOIL PRODUCTIONS.

The products are so largely those of tropical agriculture that when these are described there is little left to mention. They include cocoa, rubber, coffee, hides, vegetable ivory, and fruits. There are also some fibers, the principal one of which is the paja or Toquilla grass that is made into straw hats. Notwithstanding the equatorial climate the cereals are grown in the Andean plateaus at heights of 8,000 feet and upward, but they do not suffice for the domestic consumption. This also is true of sugar cane and cotton.

Cocoa, or the chocolate bean, has become one of the world's food products for which the constantly increasing consumption has insured a steadily advancing price. It is subject to none of the violent fluctuations and drops in value which have made coffee growing so hazardous in most tropical countries. There is no overproduction, and in view of the increased consumption and the limited regions in which cocoa can be grown a good market seems assured for an indefinite period.

COCOA STATISTICS.

Ecuador produces cocoa of superior quality which is always in demand, but its share in the world's production has fallen from more than 30 per cent in 1899, when there was a bumper crop which brought \$8,000,000, to less than 20 per cent in 1907. The chief change in the world's crop has been the gain in the Portuguese possessions of West Africa. The Ecuador exports in quantities and values since 1901 have been as follows:

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	<i>Kilos.</i>	<i>Sucres.</i>		<i>Kilos.</i>	<i>Sucres.</i>
1901.....	23,179,005	9,232,100	1904.....	18,564,123	11,746,825
1902.....	24,398,416	9,811,400	1905.....	21,127,833	9,331,278
1903.....	23,005,012	9,546,600	1906.....	23,426,897	12,196,484

In 1856 the production of cocoa in Ecuador was about 700,000 kilos or 1,540,000 pounds, and the value \$500,000, so that roughly it may be said that the increase in value of the export crop in fifty years has been from \$500,000 to \$6,000,000. A poor crop in 1907 has been partly overcome by a further increase in value. The first ten months of the year indicated a probable falling off of 20 per cent in the quantity produced, but this was more than offset by the rise in value. During 1905 the average price of cocoa in Guayaquil, f. o. b., was 60 English shillings (shilling 24½ cents) per quintal of 112 pounds; during 1906, 68 shillings; and for the first ten months of 1907, 94 shillings, or 20 cents per pound. Thus there has been no loss to the country as a whole in the amount received for the total crop, though many individual orchard owners have suffered and the Government has been deprived of considerable revenue, as the export and other taxes are levied on the basis of quantity instead of value. It should also be noted that the customs-house declarations are supposed to be from 20 to 22 per cent below the actual export value, so that \$1,000,000 might be added to the statistics in seeking to arrive at the real worth of the Ecuador cocoa crop. From any standpoint this product gives the country \$6,000,000 annually with which to make purchases abroad and meet foreign obligations. In 1906 it supplied 12,198,000 sucres out of total exportations of 21,965,000 sucres, about 55 per cent.

LIMITED PLANTING OF CACAO.

In view of the value of the product and the stability of the market, comment is often made on the failure of Ecuador further to develop so valuable a resource, as there is much land in the rich delta region which is as well adapted to cacao orchards as that now under cultivation. This is the more surprising since the causes of the decreased production per orchard and per tree are known to be permanent and these only can be offset by planting fresh orchards and systematically enlarging the areas under cultivation. The increasing dryness of the climate is an established phenomenon; the sands of northern Peru are encroaching on Ecuador and this region must be irrigated, while fresh districts are planted in the delta where the natural moisture in ordinary years is still abundant. The estimates of the new trees planted during 1906 vary from 500,000 to 1,000,000, but this is far from enough.

Absentee landlordism is said to be one cause of the lack of enterprise in providing for new orchards. Many of the owners spend the entire year in Europe, and though their incomes may suffer a slight diminution the increase in the price of cocoa has kept most of them in comfortable circumstances and without incentive to make provision for the future. Another cause of the lack of new planting has been the length of time required to secure returns on capital outlay,

the cacao tree not producing till seven years old and then requiring three or four years more to reach full productiveness. This is perhaps one reason, in connection with the unfavorable climate conditions, why foreigners have not gone more extensively into the industry, but it is not sufficient explanation of the failure of native owners to renew and extend orchards already producing in order to insure compensation for the loss of productivity in trees already bearing. In a few instances foreign capital has met the situation. Two large estates have been organized into companies with headquarters in Hamburg and these are operated very successfully with regard to the future as well as the present.

HIGH VALUE OF VEGETABLE IVORY.

After cocoa the most valuable export of Ecuador is the wild product known as tagua or vegetable ivory, from which bone buttons are made. The value of the crop ranges from \$1,250,000 to \$1,500,000 annually and, as with cocoa, Ecuador is one of the world's chief sources of supply, the quantity produced being considerably larger than in the neighboring country of Colombia. Substantially all the vegetable ivory exported is gathered from the wild palm tree, since it is not valuable enough to encourage cultivation. It is collected by the Indians, who transport it on their own backs and on the backs of burros and pack mules from the mountainous regions to the coast. If this labor were not of the cheapest kind, the product would not be worth gathering, since it could not sustain ordinary transport charges.

Nevertheless, in connection with other tropical products, tagua is an important element in the natural wealth of the country and also a fairly stable one. In 1870 the exports were valued at \$25,000; in 1879, \$285,000; in 1889, \$250,000; 1899, \$460,000; and in 1906, exportations of 21,797,000 kilos brought \$1,300,000 as against \$1,000,000 received for 19,036,000 kilos in the previous year. Unlike cocoa the price has varied little from year to year.

ACTIVE RUBBER GATHERING.

Caucho, or rubber, is becoming increasingly valuable to Ecuador, the quality of the wild product obtained being good, while expectations are entertained that artificial cultivation will be made commercially profitable. The wild rubber is obtained in the forest regions extending from the slopes of the Eastern Cordillera through the rivers tributary to the Amazon—the Napo and the Putumayo districts, the latter in the zone of boundaries in dispute with Peru.

The lack of means of communication and of access to the region, and consequently of facilities for transporting the product when once obtained, interpose serious obstacles, but they do not prevent adventurous bands of rubber gatherers from disappearing from

civilization for months at a time and reappearing with the product. In the latter part of 1907 an Argentine rubber gatherer took a band of Indians into regions which it was believed never had been reached either from Iquitos and the Amazon or from the slopes of the Andes. Other parties are making similar quests with chances that the Ecuador output of rubber will be increased.

One bad result of the search in these wild regions is the reckless cutting down of the trees. Owing to the remoteness of the districts the authorities find it impossible to prevent this destruction, but with improvement in the means of communication so that the regions are more accessible this waste may be stopped before it entirely wipes out the gum forests. Ecuador has the advantage of possessing the shortest natural route for transporting rubber to the seaboard. This is by means of the navigable Curaray River from a point on which a railroad 120 miles long will secure connection with the existing line to Guayaquil.

The tendency is to measure the value of the crop by its proceeds in 1900 when the price was high and the product was handled at an unusually good profit. In that year 10,031 quintals of 112 pounds each were exported and the price obtained was \$1,076,068, or \$1.07 per pound. In 1899 the product had amounted to 13,151 quintals, for which \$1,333,364 was obtained, but this was only \$1 per pound. In 1904 the rubber exports marketed were 480 tons; in 1905, 575 tons; 1906, 620 tons. In 1906 the amount obtained for the crop was \$775,000. The product for 1907 is not yet known, but the price was satisfactory. The Government seeks to encourage the cultivation of rubber by giving a bounty on plantations of 500 trees and upward after five years growth of the trees.

COFFEE AND CANE GROWING.

Coffee is grown for domestic consumption and some for export, but this crop is not a factor in the world's markets. The export tax was removed several years ago and when prices are high shipments of the best grade are made to the United States and Europe, but the market on which Ecuador depends is Chile. The nature of the west coast commerce facilitates the interchange of coffee for flour, wheat, and vegetables. The home consumption is estimated at 6,000,000 pounds. The exports in 1905 amounted to 1,579,382 kilos valued at about \$400,000 and in 1906 2,657,000 kilos valued at \$465,000. An export crop worth \$500,000 is not probable unless there should be a very marked rise in price. Under present conditions the only prospect of augmented exports comes from increased Chilean consumption.

While there is much land suitable for cane raising, sugar has never given promise of becoming an extensive industry, though there has

been some development in the coast region. A group of plantations in the Yaguachi district enjoy good transportation and other facilities and have central mills. They are managed on a partially modern basis, being organized into a trust. In other districts the methods of cultivating and grinding the cane are quite primitive. Increased production must depend on augmented domestic demand, for the reason that the raw sugar can not be exported in competition with Peru. When there have been exports this has been because of production above the normal home demand. But the condition more often has been the reverse, and when the tariff duties have permitted there have been importations to make up for the deficient home supply. In 1904 a few hundred tons were exported, but in 1906 the supply, which was 7,000 long tons, was not sufficient for the demand and 1,200 tons were imported from Peru, notwithstanding the protests of the planters against the removal of the duty.

The cane-sugar industry acquires some importance from the by-product of rum or aguardiente. This is distilled in some form in every part of the country, often secretly in order to avoid the taxes, and its consumption among the Indian population is by far too general to be a national good. There are no exports of aguardiente except for special reasons.

TOBACCO, COTTON, AND FRUITS.

Tobacco of fair quality is raised in the coast districts by small landowners, but its cultivation on a systematic scale is not common, though the soil is not unfavorable. In past years it was grown in quantities sufficient for a small surplus to be exported, but this has almost ceased and the crop is limited to the domestic consumption, which is about 4,500,000 pounds annually. The exports in 1906 were 140,000 pounds valued at \$11,000.

During the civil war in the United States cotton was grown in Ecuador for export to Lancashire. When the war ended and the price became normal this cultivation ceased and it has not since been resumed on a large scale, though there is a large area in which the soil is suitable. The present production is not always sufficient for the few native cotton mills and during the past year some raw cotton has been imported by them. The possibility of cotton again becoming an export crop is too remote to call for further consideration.

Tropical fruits, especially oranges and pineapples, are grown plentifully and their cultivation could be greatly augmented if the demand could be created for them, but the markets of the north are not accessible since transshipment across the Isthmus of Panama would be necessary. The country is therefore limited to supplying its west coast neighbors, Peru and Chile, the bulk of the trade being with the latter. This commerce is important enough to encourage

the establishment of a fast line of small refrigerator steamers which has been proposed by an American company.

GRAIN AND STOCK RAISING.

Ecuador heretofore has not produced the cereals in quantities sufficient for the needs of its own population, though with better means of distributing the crops of wheat, corn, barley, etc., which will come from the railway making the isolated districts more accessible, there will be some increase in the crops grown. This will not be for export.

Rice is grown in the delta districts of Yaguachi and Guayas and in some years there have been small exportations, but this was due usually to quantities of imported rice from China and India, of which there was an overstock. Rice is the food of the poorer classes, cheapness is essential to it, and since the imported article can be sold cheaper than that of native production its cultivation offers little probability of being extended.

Cattle raising is one form of agricultural industry that affords something for export as well as for native consumption. Grazing lands are abundant both on the coast and in the plateaus and valleys of the interior. Hides command remunerative prices and the exportations vary from \$350,000 to \$400,000 annually. A few thousand dollars' worth of goatskins are also exported and a larger amount of alligator hides.

In the inter-Andean regions sheep are raised both for the mutton and for the wool. The equable climate makes the conditions ideal. The mutton is of good quality, but more regard is paid to the fleece. The wool is not so good as that from sheep in the northern regions, but it is good enough to figure in the world's wool market if it were produced in quantities sufficient for export and this could be done by increasing the flocks, for which there is ample room. All the wool now produced is utilized for the local needs, most of it being woven into a coarse baize cloth.

AVAILABLE FORESTRY PRODUCTS.

Ecuador has timber resources and some dyewoods and fibers including the century plant, but none of these figure largely in the foreign commerce. These resources are, however, utilized for domestic purposes. Guayaquil is a city of bamboos and cane reeds covered with mortar and plaster, the use of pitch pine being forbidden as a precaution against fires.

The kopal or cork tree is used in the local boat-building industry and the balsas or native rafts are entirely constructed of it. The remarkable qualities possessed by this wood have been frequently described. It is obtained in the immediate neighborhood of Guayaquil and for a hundred miles or more up the rivers. The tree grows

to a height of 175 feet and from the trunks logs of 70 to 75 feet in length are obtained. The wood is exported to Peru and Chile for use in the barren coast districts which are treeless, and recently some shipments have been made to Great Britain and to the United States for testing in the construction of naval vessels, with satisfactory results. This tree is also known as the ceiba or cottonwood, and from it is obtained the fine fiber known as silk cotton.

Bamboos or bamboo splits are exported to the nitrate region of Chile for building purposes similar to the use made of them in Guayaquil. A more valuable forest product is the guayacan, a species of *lignum vitæ*. This hardwood exists in abundance and has special utility for railroad ties, but it has not yet become an export commodity. Most of the ties for the Guayaquil and Quito Railway were imported.

MINES AND MINERALS.

The value of Ecuador's mineral resources is yet problematical. They consist in gold and unexploited coal deposits. In the north or Esmeraldas district large sums were spent by British capitalists in exploiting the Playa de Oro properties, but without result, and these were definitely abandoned in 1906. In the south better success has attended the large investments made by American capitalists. The South American Development Company, a New York corporation, is enlarging its facilities for working the low-grade ores of the Zaruma district, and shipments of gold bars and concentrated cyanide slimes are now being made regularly. The total of these exportations for the recent year is reported to be about \$250,000, of which \$100,000 was gold bars and the balance cyanide slimes. The slimes, which consist of gold, silver, zinc, and iron, are shipped to San Francisco for treatment. The prospecting that has been done indicates valuable ore deposits in southern Ecuador, but the conditions are not such as to invite the heavy investments of capital necessary for their development until transportation facilities are improved by getting railroads into this region.

COAL AND PETROLEUM DEPOSITS.

It has been demonstrated that the coal deposits which lie near the main line of the Guayaquil and Quito Railway on the Columbe River, and which it was expected would furnish fuel, can not be worked. There were vertical outcrops with veins varying in width from 18 inches to 5 feet. The veins were reached by a tunnel from the base of the mountain and by cross cutting. It developed, however, that in this region of heavy landslides the mountain is still in motion and the coal veins, which lie between clay and solid rock, are constantly

being ground to powder, so that their exploitation is not feasible. Coal beds about 60 miles distant are not subject to this process and later a branch of the railroad may be built to them at an estimated cost of \$3,000,000. But in view of the conditions coal is not likely to become an article of export from Ecuador.

Petroleum exists in the sandy coast strip of Santa Elena and the crude product is extracted and utilized for fuel by the brewery and the electric-light companies of Guayaquil, but for illuminating and lubricating purposes it is cheaper to make importations than to extract it from these fields. There is also some asphalt, which is not sufficiently promising to exploit for commercial purposes. The salt mines, which are operated as a Government monopoly, supply a small quantity for export to Colombia, in addition to meeting the domestic demand.

NATIONAL INDUSTRIES.

Toquilla straw or paja is one of the most valuable agricultural resources that the country possesses, but as it is the basis of manufactured articles of export I have reserved the subject for separate consideration. It may be said to be the one national manufacturing industry of Ecuador, though not a factory one in which machinery can be used, since its nature requires handicraft in making the hats and it always will be a cottage industry.

The conditions governing the production of the straw and the manufacture of the hats have been so well and so fully described by Consul-General Dietrich in his various reports that the relation of the straw hat to foreign trade is all that calls for consideration on my part. Hat making for export has always been carried on, and as far back as 1857 there were exports to the value of \$150,000. These rose and fell through various causes and it is only since 1900 that the foreign market has been firmly established, the demand being, if anything, in excess of the supply and prices having risen more than proportionately to the increase in the cost of the raw material. In 1900 the total value of the hats exported was \$150,000, or about what it had been in 1857. In 1903 the value of the manufactured hats exported was \$350,000; in 1906, \$1,125,000, and for 1907 the estimate is from \$1,400,000 to \$1,500,000. The growth of this cabin or cottage industry appears to be limited only by the production of the raw material which is its basis. The exports form a notable national asset in providing the means for foreign purchases and the manufacture of the hats adds materially to the resources of some thousands of persons who are engaged in it, particularly in the districts of Cuenca and Manta.

VARIOUS SMALL FACTORIES.

Ecuador hardly can be said to have other national industries. In Guayaquil there are small boat-building and ship-repair yards and foundries, breweries and ice factories, cigar factories and candle and soap factories, as well as a confectionery establishment and a small sugar refinery, yet these can not be considered more than local industries. The cotton mills at Otovalo in the north have been successful with the native labor, but the example has not been followed by establishing mills in other sections, and their output is for neighborhood consumption, the cloths rarely being seen in Guayaquil or Quito.

At several places in the interior there are flour mills which grind the wheat of the districts in which they are located, but all of these are operated on a modest scale. Breweries are established in Quito and Cuenca and there is little else in the way of manufactures. It is clear that for a long period yet to come Ecuador will not be a market for installations of machinery with which to supply the means of providing for its own wants; but will continue to purchase manufactured articles and some foodstuffs with the proceeds of the cocoa, the vegetable ivory, the rubber, coffee, hides, and hats that are exported.

RAILWAY SYSTEMS.

How far the exports may be increased and also the imports depends on various considerations. The possibility and the necessity of adding to the cocoa and other agricultural crops I have already indicated. Another phase of the same subject relates to the encouragement to be given to production by providing the facilities for exchanging and marketing the products of the country. The most important of these is facilities of transportation and among them nothing approaches railway systems in importance.

The one central system which Ecuador possesses is the Guayaquil and Quito Line, better known as the American Railway, since it has been built and is operated by Americans. Its construction has taken ten years, and at this writing the rails have been laid so near to Quito and the trains are running to within so short a distance of the capital that the central line may be considered as finished. The distance from Duran, on the Guayas River opposite Guayaquil, where extensive terminal facilities have been constructed, to Quito is 290 miles.

The railroad crosses the productive tropical plains of the delta and strikes abruptly into the canyons of the Cordilleras, reaching the inter-Andean plateaus where the cereals and other products of the temperate regions are grown, though on the equatorial line. These crops are produced and flocks are pastured at elevations ranging from 5,000 to 12,000 feet. The railroad gage is $3\frac{1}{2}$ feet. The heaviest

grade is $5\frac{1}{2}$ per cent. While there are many bridges both of stone and of iron and steel there are few tunnels. The most serious of the many obstacles to railway building which nature had interposed were overcome by means of a switchback up the Pistichi Mountain, better known as the Devil's Nose, and the bold Alausi loop. The heart of the Andes is penetrated 2 miles above sea level, or at about 10,650 feet, in the Palmira Pass; but the flanks of the giant extinct volcano Chimborazo are traversed at an elevation of 12,000 feet.

OPPOSITION AND BENEFITS.

This brief indication of the engineering features of the railway is equivalent to stating that it has been a costly piece of mountain railway construction, but this subject need not be gone into. The significance is that at the beginning of 1908 Ecuador has a railway which has crossed the Andean wall and brought the interior into quick and direct communication with the coast. Its economic and commercial effects have not had time to be demonstrated, but one result has been to improve the material condition of a section of the population by the chances it has given for work at good wages.

This has aroused the opposition of some of the great landowners, who until the coming of the railway were able to employ the peons for a few cents a day. The shifting of freight from mule pack trains and bullock carts to the railway cars, a process which is still going on, also has caused opposition and this opposition, as in the case of the landowners, has been manifested somewhat violently. But such incidents are temporary and do not interfere with the real utility of the line as a means of distribution for freight and of development of new traffic that the mules and the bullock carts never could have created.

One of the earliest results of the railroad has been to provide better means for distributing the cereal products of the isolated districts among one another and also to enable these products, whenever there is an excess above the local demand, to be brought to Guayaquil and the coast. Wheat is not yet produced in quantities sufficient to render the importations from Chile and California unnecessary, but barley and alfalfa have already found a valuable outlet. On imports the effect of the railway will be very beneficial, for it will enable the manufactured articles to be transported to the interior more cheaply, and when the price, in which transportation heretofore has been so heavy a factor, is cheapened, the consumption will increase.

EXTENSIONS AND PROJECTS.

These effects will further be felt when the north and south extensions of the railway which are part of President Alfaro's general

project are carried out. These include a line from Cuenca in the south, 95 miles, to join the Guayaquil and Quito at Huigra, and a branch north to Ibarra, 100 miles from Quito. The commerce of the southern district is large and on this account the Cuenca branch will be the first one to be built.

A line from Ambato on the Guayaquil and Quito Railway to the Curaray River, whose waters are navigable to the affluents of the Amazon, also has been surveyed. The distance is 120 miles. The condition of the national finances does not indicate that any of these lines is likely to be of immediate realization, yet with the central trunk in operation, these north and south feeders are certain to be built ultimately. In the meantime the improvement of the cart roads and the mule trails in order to reach the existing railway more easily is assured to the benefit both of the internal commerce and of imported merchandise.

Other railway projects have for their object the connection of the minor ports with the producing territory back from the coast. There are five of these projects: From Puerto Bolivar to Machala, from the Bay of Caraquez to Choné, from Manta to Santa Ana, from Salinas to some point on the coast near Santa Elena north of the Gulf of Guayaquil, and from Santa Rosa to Zaruma. Little progress has been made with any of them. Some rails which had been paid for with public funds were laid in the Bahia cacao district toward Choné, but the work was abandoned. On the line between Puerto Bolivar and Machala there has been some extension into the cacao districts and to provide for the seacoast traffic.

PUBLIC IMPROVEMENTS.

The corollary to the completion of the Guayaquil and Quito Railway across the Andes to the capital should be a well-matured plan of public works and particularly of sanitary works if Guayaquil and the whole country are to reap the full benefit of improved transportation facilities. This is of especial importance both to the import and the export trade. Commerce now pays heavy tribute to the unsanitary conditions. Steamers are compelled to anchor well down the river at a point opposite the Matadero or slaughter house, and it is estimated that the Guayaquil merchants pay \$200,000 a year for lighterage which might be saved.

The interruption of west coast traffic which is experienced with the bubonic plague always threatening and yellow fever always existing would justify a heavy expenditure jointly by the municipality and the national Government in order to put the port into sanitary condition by permanent works which would insure the continuance of that condition. Bubonic plague has not yet invaded

Ecuador, but it is an ever-present menace, and the yellow fever record of Guayaquil, with its heavy percentage of fatalities for foreigners, is common history. Smallpox also is frequently epidemic, with a larger number of deaths than is credited to yellow fever, and from this disease the natives are not exempt. Its ravages are chiefly among them.

SANITATION PLANS AND WATERWORKS.

Plans have been prepared under the direction of the board of health for a very complete system of sewerage, paving, and other improvements, which if carried out would go a long way toward the sanitary reconstruction of Guayaquil, and whether put into effect or not the information published in connection with them affords valuable suggestions. The idea is that a company or syndicate may be formed to undertake the work or to provide the necessary funds under an arrangement with the municipality of Guayaquil. If this project should be carried out the improvement in the general health conditions undoubtedly would be of much benefit to commerce.

However, it does not fully meet the situation as to yellow fever, as there is no provision for control by preventing the mosquito infection as has been done so successfully by the United States authorities on the Isthmus of Panama. By putting into practice the regulations of the international Pan-American sanitary convention, through a treaty or other arrangement which would permit the cooperation of the United States sanitary authorities, Guayaquil could be shielded against yellow fever and other epidemics as effectively as are Panama and Colon, and the gain to commerce in general and to Ecuador's commerce in particular would be immense.

That the municipality is capable of meeting the situation, if it chooses, is shown by what it already has done in the way of public works. An American contracting engineer brought water down from the mountains and under the river, thus providing the city with a complete system of waterworks, which insures a sufficient supply at all times. The destructive fires which swept the city at regular intervals have been minimized by rebuilding with streets not less than 100 feet in width and the installation of a pumping system that has proved very effective and has caused the heavy premiums formerly paid for fire insurance to be materially reduced. Garbage crematories of the most modern kind have been installed for the disposal of the city's refuse. These improvements show that public spirit is not lacking. All that is needed is for this public spirit to be directed into the broader channels which will make Guayaquil a healthful port and insure to it the benefits of the commercial advantages which its geographical position on the west coast gives it the opportunity to realize.

FOREIGN COMMERCE.

Since I have described the products of Ecuador which form the basis of its foreign purchases, the international commerce may be studied in its entirety before analyzing in detail the country as a market for foreign goods. Statistics are somewhat backward, but the full details for the calendar year 1906 are given and it may be said that the general movement of importations and exportations during 1907 showed no marked variation from the previous year. Following are the figures for 1906 (the value of a sucre being 48.7 cents) :

EXPORTS.

Articles.	Value.	Articles.	Value.
	<i>Sucres.</i>		<i>Sucres.</i>
Cotton-----	12,900	Gold ore and bars-----	309,432
Cocoa-----	12,198,484	Gold specie-----	547,091
Coffee-----	931,369	Silver coins-----	7,480
Casara bark-----	29,150	Straw hats and straw-----	2,390,810
Rubber-----	1,546,189	Tobacco-----	22,113
Hides:-----		Tagua (vegetable ivory)-----	2,615,337
Cattle-----	722,703	Miscellaneous-----	506,436
Goat-----	4,422		
Alligator-----	11,999	Total-----	21,964,714
Fruits-----	108,793		

IMPORTS.

	<i>Sucres.</i>		<i>Sucres.</i>
Alimentary articles:-----		Railway and telegraph material, locomotives, etc.-----	929,354
Animal-----	1,371,032	Tobacco and cigars-----	5,553
Vegetable-----	1,244,298	Mineral and metallic substances-----	74,403
Mineral-----	314	Articles for the fine arts, scientific instruments, etc.-----	310,922
Textiles-----	3,533,208	Drugs and medicines-----	518,841
Raw material:-----		Firearms and accessories-----	135,377
Animal-----	205,028	Specie and bank notes-----	1,982,910
Vegetable-----	181,960	Miscellaneous-----	623,402
Mineral-----	124,915		
Vestments, fine cloths, jewels, and articles of personal adornment.-----	1,540,834	Total-----	17,011,605
Machinery, tools, and instruments.-----	1,975,759		
Household furnishings, articles of domestic use, furniture, etc.-----	1,598,821		

The total imports and exports amounted to 38,976,319 sucres.

It will be observed that specie and bank notes figure in the returns as part of the commercial movement. To get at the merchandise they should be eliminated. Thus with the gold and silver coin which was exported during 1906 to the amount of 554,571 sucres deducted, the total exports should be 21,410,143 sucres. Similarly, with the 1,982,910 sucres of specie and bank notes which figure in the imports deducted, these would amount to 15,028,695 sucres, showing that the commodities purchased are considerably less than those which are sold. Yet this apparent loss in merchandise is made up by the addition of 20 per cent to the valuations as given in the official statistics, which the mercantile community of Guayaquil is in the habit of making to both exportations and importations, in order to arrive at the true value of the foreign trade. With these deductions and additions allowed the movement of merchandise in and out of Ecuador during 1906 would be \$22,000,000.

The commerce by countries in 1906 is exhibited in the appended tables, as shown by official statistics:

Country.	Imports.	Exports.	Country.	Imports.	Exports.
	<i>Sucres.</i>	<i>Sucres.</i>		<i>Sucres.</i>	<i>Sucres.</i>
United States.....	4,656,895	6,785,039	China.....	55,221	55,221
Germany.....	3,095,144	3,595,716	Spain.....	492,224	1,004,529
United Kingdom.....	5,560,343	1,327,505	France.....	1,275,797	6,821,211
Argentina.....	856	132,012	Holland.....	545	73,400
Australia.....	9,770	200	Italy.....	521,684	343,572
Austria.....	40,875	115,065	Mexico.....	205,953	43,441
Belgium.....	776,248	15,325	Peru.....	5,800	683,563
Bolivia.....		1,000	Panama.....	3,800	33,020
Brazil.....		10,000	Uruguay.....	7,110	20,725
Central America.....	54,773	40,797	Venezuela.....		5,965
Colombia.....	49,664	27,413	Norway.....		6,000
Cuba.....	4,041	40,450			
Other West Indies.....	20	15,038			
Chile.....	198,552	818,698	Total.....	17,011,605	21,964,714

SHARE OF LEADING COMPETING NATIONS.

The imports from the four leading countries may be studied from the following comparisons for a series of years, with the explanation that specie, which is drawn principally from England, is included:

Year.	United States.	United Kingdom.	France.	Germany.
	<i>Sucres.</i>	<i>Sucres.</i>	<i>Sucres.</i>	<i>Sucres.</i>
1900.....	3,434,430	3,974,807	1,240,677	2,577,290
1901.....	3,966,308	3,575,100	1,995,693	2,712,467
1902.....	2,982,660	5,750,785	1,588,030	2,085,900
1903.....	2,893,537	3,196,481	1,011,738	2,000,001
1904.....	4,897,848	4,009,757	1,234,516	2,985,114
1905.....	4,542,272	4,558,547	1,118,793	3,101,957
1906.....	4,656,895	5,560,343	1,275,797	3,095,144

Some features of this trade as distributed among the various countries call for explanation. While the imports from the European nations can be rather accurately accounted for, the exports do not measure the real commerce of Ecuador with several of them, because so large a proportion is taken "for order" and distributed from Southampton, Havre, or Hamburg. Thus in 1906 of the imports credited to France—6,821,000 sucres—cocoa constituted 6,072,000 sucres, and it is known that Germany and other continental countries reimport it from France in large quantities, Germany in particular supplementing its own direct importations from Ecuador.

In the imports Great Britain supplies much less of the merchandise than would appear, since the imports of specie are almost entirely from that source and in 1906 the importation of sovereigns was £200,000 or 1,000,000 sucres. Similarly, specie to the amount of 547,000 sucres should be deducted from the exports to Chile and Peru in order to measure the merchandise exports to them correctly, since both these countries draw English sovereigns from Ecuador.

AMERICA THE BEST CUSTOMER.

The trade of the United States and Ecuador is not subject to the deductions or additions which are necessary in the case of other countries. The Ecuador products imported into the States are consumed there and the exports to Ecuador consist of general merchandise—specie exports being rare. The total trade in 1906 approximated \$6,000,000. The United States is a large buyer of all the leading Ecuador products. In the year for which the statistics are given it took cocoa to the value of 2,369,000 sucres; rubber, 1,209,000 sucres; hides, 640,000 sucres; tagua or vegetable ivory, 638,000 sucres; and straw hats, 1,133,000 sucres. Its position as the best buyer of Ecuador products fairly entitles it to be the largest seller to that country and it maintains the geographical advantage. The bulk of the commerce both ways is through New York, but Mississippi Valley products are shipped through New Orleans to the value of \$250,000 yearly and San Francisco and the other Pacific coast ports have a direct trade.

Germany, which is a heavy buyer of vegetable ivory, cocoa, and straw hats, clearly is next to the United States in the actual exchange of commodities though the statistics appear to give France the lead by reason of the cocoa imported for transshipment. Great Britain, after the deduction of specie shipments, is still able to show commodities exported to more than twice the value of those imported. Its control of the cotton piece goods trade is the basis of this advantage as compared with other countries. It also ships coal and a variety of iron and steel products. Its largest purchase is of cocoa, the amount being 800,000 sucres, and after that straw hats, 300,000 sucres. France in addition to the cocoa imported for consumption and distribution takes vegetable ivory to the value of 374,000 sucres and hats, 135,000 sucres. China and Australia provide a small trans-Pacific trade, rice and silks being imported from China and coal from Australia.

NEEDED IMPROVEMENTS.

In considering Ecuador as a future market the prospect or the probability of public works such as harbor improvements and the sewerage and sanitation of Guayaquil must be taken into account, but this can not be done with definiteness. A new market house has been constructed in Guayaquil but nothing has been done toward the new custom-house. The extensive iron pier and wharf and similar improvements for which concessions have been given by the National Congress to various parties at different times make little headway. When these works and others like them are once entered upon it will mean a decided demand for iron and steel products. In the meantime some public works in other cities are in a more promising state. Quito has an insufficient water supply and a new system of water-

works is declared to be imperative. A contract was made for the system, but it has been in abeyance. Now there is said to be a prospect that it will be put into effect. In the town of Riobamba a contract has been made with an American engineer for a system of waterworks.

AMERICAN MILLS COULD NOT ACCEPT ALL ORDERS.

The importation of steel rails and railway material may for a time show a falling off as compared with 1906 and 1907. The completion of the Guayaquil and Quito line to the capital probably will be followed by the construction of some short spurs and extensions in the delta district, but until the building of the larger branches from Cuenca and Ibarra, respectively, to the main line is begun, or the Government finds itself in a position to finance the Curaray River branch in order to get to the rubber district of the navigable tributaries of the Amazon, large purchases of rails and railway material are not to be expected. The Guayaquil and Quito Railway has been supplied with American rails and rolling stock except when the inability of the mills of the United States to fill the orders in time caused some purchases to be made abroad. While there will be some falling off in rails this loss will be likely to be made up by gains in other iron and steel products. Should the price of rails drop that also may encourage the revival of some of the projects for railroad building. With the freight and other charges the rails for the Guayaquil and Quito line cost on an average \$36 per ton laid down on the wharf at Duran.

GENERAL DEVELOPMENT.

Electrical installation is likely to be continued on a larger scale than during the past. Up to the present time there have been few electrical power plants established, though the available force abounds in the waters of the Andes. Guayaquil has an electric-light system which is utilized in business blocks and private dwellings and on the wharves and river landings, but the streets are lighted by gas and the change to electricity awaits the convenience of the gas company, which has shown no disposition to forego the advantages of its contract with the municipality unless compensating concessions are made. So also the company which proposes to substitute the trolley for horse cars has not yet been able to put into effect an arrangement for electrifying the tramways. But these changes are sure to be made.

A project has been formed by Ecuadorian and American capitalists for transmitting power to Guayaquil from the Chimbo River, 55 miles distant, which will be ample for lighting, traction, and such light manufacturing as exists. When this installation is made the purchases of machinery will be an important item.

The Anglo-French company which has the electric power concession in Quito has extended its plant and the facilities for illuminating the city have been enlarged and the number of lights increased. A more important extension is the projected trolley tramway system. The hilly streets of this ancient capital of Inca civilization have to be traversed on foot just as in the time of the Incas. Many of the streets are too steep for vehicles and a horse-car system would be impracticable. So up to the present the only means of getting about has been by strenuous pedestrianism. Work will be begun on the trolley installation during the year.

INTRODUCTION OF MODERN MECHANISMS.

Some of the smaller cities may follow the example of Guayaquil and Quito and provide for electric lighting. Extensions of the Government telegraph and telephone lines will be made and there is a slow spreading of local telephone systems. Cooling appliances are quite common in Guayaquil. Most of the electrical installation of all kinds, even where European capital is engaged in the enterprise, is made by American companies and the setting up of new plants means increased importations from the United States.

Agricultural machinery is one of the lines for which markets are yet to be created in Ecuador. Irrigation plants are vaguely comprehended, but some Ecuador landowners look forward to introducing them in the southern coast section of the country where the cocoa production is falling off so markedly on account of the increasing dryness of the climate. That this change would come had the authority of as high a scientific authority as Alexander von Humboldt a century ago. Now it is coming with a swiftness that enforces the necessity of turning to artificial means in order not to lose the richness of a soil whose productivity has been demonstrated through a long series of years.

Suggestions have been made for pumping plants in the Santa Rosa district where the drying up of the coast lands is most noticeable and the sands are encroaching most rapidly on the alluvial soil, but there is no definite project. Makers of irrigation machinery in the United States might find it worth while to send an expert to study this region and provide local landowners and capitalists with specific statements of the kind of plants which should be installed and estimates of the expense, for the landowners, while recognizing the agricultural situation, are slow to act on their own initiative.

LEADING MERCANTILE IMPORTS.

Thrashing machines and even harvesters are not likely to find a market soon, though some of the grain fields in the inter-Andean plateaus are extensive enough to call for them. But the owners of the big estates are satisfied with the results they obtained from the cheap

labor of the peons through scythe and sickle and hand flail. For plows there is a better prospect. The Indian cultivator still clings to the wood prong both for turning up the soil on his own little patch of the mountain side and on the larger farm of the landowner. In the majority of the regions of the interior no other kind of plow ever has been seen. Yet the railway is already working a change. At Ambato, which is the center of a somewhat sandy agricultural district, some modern plows are in use and they are employed in a few other districts. Dealers in Guayaquil now keep them in stock and seek to interest their customers in them.

In farm hand tools there is a fair use of those of American manufacture, but this trade is divided with England and Germany. High-quality machetes of New England make control the market in the coast region where the sugar plantations are. Hoes and adzes are imported chiefly from Germany and England and shovels from England and the United States. Axes and hatchets are from the United States. There is a growing use of wire fencing both barbed and woven, with a tendency to favor the woven wire.

Machine tools, while not extensively used, find a good market, and the bulk of them are from the United States, though some of fine grade are imported from France. Ecuador natives are noted for their skill in woodwork and carpentry. Lathes, drills, and chisels of good quality are therefore acceptable to them. The best Philadelphia handsaws also find a market, though the change of some of the local industries to steam sawmills has partly diverted the demand to saws of that class.

HARDWARE, SEWING MACHINES, AND MOTORS.

The market for builders' hardware is a good one, yet largely local in its character. During 1907 some 300 new houses were built in Guayaquil, though many of them were not large ones. But all of them call for more or less builders' hardware and much of this is supplied from the United States. Wire nails are almost an American monopoly, but in bolts, locks, keys, etc., England and Germany compete with the American articles. The use of sheet-iron roofing is growing in the interior as well as on the coast. The United States is getting a little of this trade, but can hardly expect a large share until the price is lowered to a level with the English quotations for corrugated iron. England also has a fair proportion of the trade in iron bars, tubes, and tinplate. American manufacturers do not appear able to meet the English prices for cheap iron cots and bedsteads, for which there is a very good market. England sells some tinware and cutlery, but Germany has the advantage in most of the articles of household hardware, though not to the exclusion of the United States.

The Guayaquil dealers make attractive displays of the different lines of machine tools, builders' hardware, cutlery, etc., and American manufacturers find it advantageous to exhibit complete sets of their manufactures in this manner.

There is some competition in the sale of sewing machines, but it is not strong enough seriously to affect the purchases from the United States. Typewriters and iron safes are of course of American manufacture. Printing press machinery is from the United States. Some of the Guayaquil newspapers have the latest improved presses and one of them has introduced linotypes.

Good roads are not extensive enough to provide a large market for motor vehicles, but there is a field for them. The national highway from Quito to Ambato, 75 miles, is kept in repair by an automobile transportation company under arrangement with the Government, and owners of private motors have the benefit of this arrangement. American motors were the first ones introduced into Ecuador, but the French makers came into the market and for a while controlled it. Now motor cars from the United States are again being imported. Motor boats have not come into vogue, though they would naturally supplement the steam launches which are imported from the United States for use in the Guayaquil Harbor and the rivers where the native balsas or rafts ply.

AMERICAN TEXTILE TRADE LOSS.

The trade in textiles is one on which the United States has little reason to congratulate itself. At one time in Ecuador the trade in prints meant American prints. Now cotton piece goods are almost a Manchester monopoly. The story is told in the customs-house returns of importations, which have this item: "Cotton cloths in general, Great Britain, \$500,000; United States \$25,000." Such headway as has been made by other countries in getting a small share of this market has been by Germany and Italy. The United States still sends some sheetings, drills, and coarse prints, but with little regard to the special requirements of the market, which are the same as in other South American countries where both the torrid and the temperate climates obtain and the fondness of the natives for bright-colored and gaudy cloths governs their purchases. Some drills are supplied from England that could be furnished as well by the United States. Baizes and gingham, for which there is a good demand, are controlled by Manchester. Italy and Germany supply casinettes. Germany divides with England the trade in cotton blankets and England supplies the sewing cotton and the satin.

In textiles other than cotton England and Germany are the principal competitors and their competition is with each other. Eng-

land supplies the larger share of the cashmeres and linens and Germany the woolen shawls and ready-made clothing. Stiff hats are from England, which also furnishes carpets and jute bagging. Italy has most of the trade in felt hats. Silks and fine dry goods, for which the demand in Guayaquil is considerable, are imported from France, but silk and cotton mixtures are chiefly from England, and silk mantillas are imported from China. German hosiery has the market for this class of goods.

LEATHER GOODS AND FOODSTUFFS.

A variety of leather goods are imported, including trunks and valises from England and saddles from the United States. The petaca or small leather trunk which is so essential for mountain traveling is manufactured locally to a small extent, but the material is imported. Germany, France, and the United States supply the tanned leather, Germany having two-thirds of the trade. American boots and shoes continue to hold the favor they gained some years ago, and this market is worth \$150,000 annually. Imitations of the American styles have been attempted and importations have been received from Spain which were sold at a lower price. But the quality was inferior and notwithstanding that the American style was adopted the fit was unsatisfactory. The hot and humid climate deteriorates leather goods rapidly, and this is one condition which makes it desirable for the American boot and shoe factories to maintain the quality.

In foodstuffs and provisions the United States has no strong competitor. Wheat flour is occasionally shipped by Chile, but not in large quantities. The American importations in some years amount to \$250,000, while a few thousand dollars' worth of corn meal is taken and small quantities of oatmeal and breakfast foods. Lard is supplied entirely from the United States, the value of the imports in 1905, which was an average year, having been \$330,000. Hams, bacon, and other packing-house products are imported in small quantities and there are some importations of tinned goods. The imports of cotton-seed oil from the United States in 1905 were valued at \$1,500 and olive oil from Italy, Spain, France, and other European countries at \$26,000. Italy supplied butter and cheese to the amount of \$35,000. Vegetables of various kinds, peas, beans, lentils, onions, are imported from Chile.

BEVERAGES, OILS, AND DRUGS.

The trade in wines, liquors, beverages, and mineral waters is rather curiously distributed. Notwithstanding that there are local breweries the imports of beer have increased, possibly because of the lowering of the duty. This trade is divided between Germany and

the United States, about 75 per cent of it being held by Germany. In cognac and cheaper brandies and champagnes France has nearly all the business. Whiskies, of which the impositions are small, are divided between Scotland and the United States. Ordinary wines are from Spain, France, the United States, and Italy in the order named. Italy has the monopoly of vermouths. Small quantities of mineral waters are imported from Germany, France, and the United States.

In petroleum and other oils, paints, varnishes, medicines, and drugs and chemicals, the United States holds a leading place. Petroleum is supplied to the exclusion of other countries. Drugs and medicines from the United States in 1905 were more than double the imports from all other countries. Fine soaps are furnished by Belgium, Germany, and France in the order named, but some toilet soaps and perfumes of American make have an established market which they hold in spite of competition. The trade in stearin candles to the value of \$150,000 annually is in the hands of Belgium and Germany.

FURNITURE OPPORTUNITY.

In the long list of miscellaneous articles there are some of which a larger quantity could be supplied by the United States. One of these is furniture. Germany now has this market. Paper and its manufactures are also staple imports from Germany. The United States supplies printing paper but does little in writing paper and similar stationery. In earthenware, crockery, glassware, porcelain, and similar household articles the trade is almost entirely in German hands. The United States supplies more lampware than Germany. Cheap enamel ironware is not in extensive use, but the bulk of what is used comes from Germany. Belgium and France supply some fine crystal ware. Among other household articles the United States is the source from which brushes and sweeping brooms are drawn. Sanitary appliances are from England and the United States. Pianos and other musical instruments are from Germany. Common muskets are imported from Spain and France, revolvers from Spain and England.

SHIPPING SITUATION.

The commercial movement of Ecuador as to shipping might be divided geographically into the trans-Pacific trade with Australia and China, which is not of much importance; the coast Pacific trade from Portland and San Francisco and intervening ports on the north and from Valparaiso and intervening ports on the south; and the trade via Panama and the Straits of Magellan, respectively. The bulk of the traffic is by the latter two routes, though the coast Pacific trade is considerable, covering as it does the cargoes to and

from Oregon and California, Mexico and Central America, and Peru and Chile.

The nationalities of the vessels which have the carrying trade of Ecuador appear from the following exhibit of the Guayaquil shipping for two years:

Nationality and class.	1905.		1906.	
	Number.	Tonnage.	Number.	Tonnage.
British steamers.....	105	172,141	97	153,116
British sailing vessels.....	2	2,680	3	4,787
Chilean steamers.....	53	86,820	51	85,272
German steamers.....	36	78,421	33	88,495
French steamers.....	3	7,891	3	9,590
Norwegian.....	2	3,858	-----	-----
Foreign sailing vessels.....	10	6,737	8	8,813
Total.....	212	358,548	195	350,073

The British vessels are chiefly those of the Pacific Steam Navigation Company which ply between Panama and Valparaiso, and the Chilean steamers are of the Compañía Sud Americana de Vapores, which follow the same route. The German ships are mostly of the Kosmos Line, whose itinerary is from Hamburg to San Francisco, though there are also some direct voyages of German ships between Hamburg and Guayaquil. The other vessels indicated come under the designation of the "tramps" which compete with the regular liners, and some of the ships of British and German nationality belong in the same class. The Lamport and Holt and the Gulf Line and the Merchants Line from New York dispatch occasional vessels by way of Magellan Straits.

TONNAGE MOVEMENTS.

Measured by actual freight tonnage the shipping of Guayaquil in 1906 amounted to 70,000 tons, of which 5,000 tons was local coastwise traffic. In the import cargoes there figured 14,000 tons of coal brought by both steamers and sailing vessels and 3,000 tons of railway material. There were 6,000 tons of merchandise for coast ports other than Guayaquil. Exports were 32,500 tons, distributed as follows:

	Tons.
South American coast ports.....	5,500
North Europe via Magellan.....	8,500
North Europe via Panama.....	9,400
United States via Panama.....	7,500
Spain via Panama.....	1,600
Total.....	32,500

Freight imported via Panama was 7,500 tons and by way of Magellan an equal quantity. The noticeable feature of the shipping is that the traffic by way of the Straits is decreasing relatively and

that via Panama is increasing both relatively and absolutely. During 1904 and the early part of 1905 there was an increase of the cargoes brought through the Straits and several of the steamship lines added to the number of their vessels using that route, but this was checked by a temporary cause which has a permanent effect. The prevalence of the bubonic plague at some of the Atlantic as well as the Pacific ports has proved a serious interference with shipping. Vessels coming through the Straits are fumigated at one of the lower Peruvian ports and then if they proceed to Guayaquil another fumigation is required before they will be received. These fumigations are both costly and vexatious. While the bubonic plague has thus had a tendency to divert cargoes from the Magellan route it has not been the leading cause. Guayaquil is only 835 miles from Panama, and Panama is the natural route for the bulk of the commerce of Ecuador. Shipping facilities and freight rates on the west coast have been discussed very fully in two official reports which review the whole situation.^a

INADEQUATE STEAMSHIP FACILITIES FROM PANAMA.

The information given in those reports has a special interest for Guayaquil since it is one of the leading west coast ports. This information need only be supplemented by again stating that notwithstanding the nearness of the ports of the United States no advantage is had in shipping rates and European shippers appear able to neutralize the advantage American shippers have in time and distance. A more important matter is the inadequacy of the existing facilities to provide for the increased traffic via Panama and the increased trade generally. Guayaquil merchants complain of the losses to which they are subject by the delay and uncertainty in receiving the consignments and in this they have common ground with the merchants of other west coast ports.

Whatever the situation in the past may have been, I have heard no complaints that the Panama Railway now fails to get the freight across the Isthmus. The trouble of the west coast importers is in having it taken from Panama by the steamers. Some of them send special representatives to Panama to labor with the steamship agents. In the latter part of October a steamer of the Chilean Line sailed one day and one of the British company the following morning. Yet these two steamers left 5,200 tons of freight and some frantic shippers on the dock. The two companies are supposed to have a work-

^a(1) Report to the Secretary of War by Joseph L. Bristow, Senate Document No. 429, Fifty-ninth Congress, first session. (2) Report on Trade Conditions in Central America and on the West Coast of South America, by Lincoln Hutchinson, special agent of the Department of Commerce and Labor.

ing agreement as to sailing schedules and other matters but apparently it is observed only in maintaining freight and passenger rates, the latter being comparatively the highest in any part of the world.

DELAY OF PASSENGERS.

The demoralization in the sailing schedules often puts passengers to a heavy expense. Nominally the companies dispatch their steamers from Panama alternate weeks, Thursday or Friday being the sailing day, so that passengers leaving New York, Southampton, Hamburg or Cherbourg are supposed to be able to continue their voyage with a detention of not more than one to three days. But during October passengers from Europe and the United States had to wait intervals of eleven and again of twelve days in order to take their passage for Guayaquil and the other ports. I am informed that this delay was exceptional, yet it is admitted that no reliance can be placed on the published schedules. Increased trade on the west coast has increased the number of business men and others traveling, and they are entitled to some consideration both in preventing loss of time and in incurring expenses.

The question of freights, however, will be the controlling one and in view of the permanent addition to traffic by way of Panama the necessity of improved shipping facilities through the present lines enlarging their service or by the establishment of competing ones is most important to the commerce of Ecuador and to the entire west coast of South America.

NATIONAL FISCAL SYSTEM.

The fiscal system of Ecuador does not bear heavily on imported commodities, many of these being articles of prime necessity which could not stand too large an impost. Though the various surtaxes, warehouse and wharf charges, and miscellaneous dues must be taken into consideration in connection with the customs schedules the total does not amount to figures that are formidable. With a few exceptions the tariff rates are specific and are based on net and gross weight according to the metric system. Articles free of duty include a wide range of construction material, steel rails, iron and steel bridge work, agricultural and other machinery, instruments and apparatus, building material, etc. During the periods of domestic agricultural scarcity wheat and other cereals are admitted free while the duties are reduced on various food products, but that on flour is high. Textiles bear a large part of the duties that are collected.

The proportion of the import and export taxes is about \$2 on imports to \$1 on exports. In 1906 the customs income from import duties was 5,649,000 sucres and from export duties 2,620,000 sucres.

The internal-revenue receipts are from taxes on the consumption of liquors, land transfers, the stamp tax, the salt monopoly, and miscellaneous sources. The post-office system and the Government telegraph and telephone lines produce no net revenue, both being operated at a loss. The national-revenues from all sources vary from 11,000,000 to 12,000,000 sucres, or \$5,500,000 to \$6,000,000. After the current expenses of the Government are met this leaves little if any surplus for guaranteeing railway construction and carrying on public improvements of a national character. President Alfaro's administration is strongly committed to railway construction, but it has to take into account that the Government of Ecuador is poor and its wishes in this matter can not always be converted into deeds. However, the recognized public debt, foreign and internal, is not so large as to preclude the probabilities that sufficient guaranties may be afforded foreign capital to induce it to undertake some of the projects which I have outlined in treating of railways.

THE PUBLIC DEBT.

The latest official information concerning the public debt of Ecuador is contained in the report of the minister of hacienda (secretary of the treasury) for 1906. The obligations comprising the foreign debt consisted of the bonds issued for the Guayaquil and Quito Railway; the consolidated debt or loans from the banks of Guayaquil to the Government; credits to be consolidated; and the loan from the French Finance Corporation. These debts are usually described in terms of condors, the condor being the coinage basis of the Ecuador gold money system, equal to 10 sucres, and the exact equivalent of the English pound sterling. In July, 1904, gold bonds for the railway had been issued up to \$9,500,000 and later additions increased the amount to about \$12,300,000, making allowance for the redemption or amortization. Some questions in dispute between the Government and the company relating to the full amounts due, the interest payments, etc., presumably will be settled by the arbitration that is now in progress. In 1906 an issue was made of \$1,000,000 gold custom-house bonds redeemable at par in payment of 50 per cent of the general export duties and 100 per cent of the export duties on vegetable ivory. The proceeds of this loan were for the payment of the Guayaquil and Quito Railway bond coupons. It was taken by the local merchants and the banks.

The Guayaquil Bank loans to the Government vary according to the latter's necessities and the willingness of the banks to provide for them. In 1906 the sum was 4,207,000 sucres or \$2,100,000. Provision is made for paying the interest and the amortization fund on these loans by making over the collection of the export and import duties

out of which the banks retain the amount that is to be applied to interest and redemption.

The internal consolidated debt amounted to \$300,000 and the floating debt consisted of obligations to Government employees and similar items which scarcely can be figured as part of the national debt. The loans from the French Finance Corporation totaled \$440,000 and were contracted in order to meet the railway coupons.

Guayaquil has a municipal debt of about \$1,000,000. The city is rich and solvent and could add largely to this sum in carrying out the project of sanitation without in any manner impairing its credit.

MAINTENANCE OF GOLD STANDARD.

One source of strength to Ecuador which gives stability to its commerce with foreign nations, particularly during periods of political revolutions and other uncertainties that in some of the South American countries so seriously hamper trade, is its monetary system. It easily maintains the gold standard, there are no violent fluctuations in exchange, and the value of products bought in the country or of goods shipped to it never is in doubt. The legislation providing the gold standard went into effect in 1900. The real basis is the English pound sterling, which was declared by law to be current and legal tender. This provision accounts for the importations of English sovereigns and their employment as part of the gold reserve of the banks. In addition to the gold coins the circulation is of silver and paper notes. The unit of circulation is the sucre and 10 sucres equal a gold condor or English sovereign. The sucre is issued both as silver coin and as a bank note, but the more convenient form of the note is preferred and the silver circulation is more of the minor coins. Bank notes are issued in the denominations of 1, 2, and 5 sucres and upward.

The Ecuador law requires a gold reserve of 50 per cent and an additional 10 per cent of silver for banks of issue. There are three banks of issue whose notes are in circulation: Banco del Ecuador and Banco Comercial y Agricola, of Guayaquil; and the Bank of Pichincha, of Quito. The latter is a new institution and was started chiefly with American and other foreign funds with a capital of \$300,000.

BANKS OF ISSUE.

The total outstanding circulation of the banks of issue as of the year 1906-7 is 8,368,000 sucres, divided as follows: Banco del Ecuador, 4,098,000; Banco Comercial y Agricola, 3,950,000; and Bank of Pichincha, 320,000. This does not mean that the business of the country is conducted entirely on 8,368,000 sucres or \$4,184,000, since there is the movement of species, principally sovereigns imported

from England. In 1906 the exact importations were £196,000 and of this amount £47,000 was transferred to Peru and Chile against drafts on London. At the beginning of 1906 the circulating medium in the hands of the public was \$11,666,824, divided into bank notes, \$6,367,000; gold notes, \$2,504,869; and silver notes, \$2,794,955.

Besides the three banks whose notes are in circulation two mortgage loan banks—the Banco de Credito Hipotecario with a capital of \$500,000, and the Banco Territorial with \$200,000 capital—are organized on a basis which gives them the right to issue notes. The mortgage banks issue warrants or “cedulas” for each operation they make, these warrants bearing 9 per cent interest and being guaranteed by the mortgage on the property and by the bank’s capital. The Banco Comercial y Agricola also has a mortgage loan department.

The total deposits in all the Guayaquil banks, including the savings banks, at the beginning of 1906 was \$4,115,762.

DISCOUNTS AND EXCHANGE.

The rate of discount for the quarter of century preceding 1905 was 12 per cent. Then it was lowered temporarily to 7 per cent, with subsequent increase to 8 per cent. Banking has been a very profitable means of investing capital, as appears from the summary of the operations of the leading financial institutions. The Bank of Ecuador paid a dividend of 15 per cent in 1906 and this has been its prevailing rate for a number of years, except when it paid 16 per cent. The Banco Comercial y Agricola paid 12 per cent; the Banco de Credito Hipotecario 15 per cent, and the Banco Territorial 10 per cent. The average dividend on approximately \$5,000,000 was 13 per cent. All of these institutions paid good dividends through the previous years, although in 1902, owing to a commercial crisis, the Banco Comercial called in the whole of its unpaid capital, passed its dividend and in the following year paid only 6 per cent. In 1906 all the banks, in addition to the dividends paid, added to their reserves. That the financial community of Guayaquil is a strong one is apparent from its banking operations.

The facilities for international commerce are provided by means of drafts on London and New York, but the transactions are for the most part conducted through London. Ninety-day commercial drafts on London, Paris, or Hamburg with the bill of lading attached are discounted at from 1 to $2\frac{1}{2}$ per cent. For New York the time is usually sixty days. These commercial drafts are drawn by the exporters against shipments of cocoa, ivory nuts, rubber, hides, straw hats, etc. Bank drafts on New York and London are at three days’ sight and $\frac{1}{2}$ to 1 per cent premium.

MERCHANTS AND TRADE METHODS.

The commerce of Ecuador, the banking, exporting and importing, is principally in the hands of strong native firms, though foreigners are partners in some of the houses, particularly those who are interested in shipping. Most of the exporters are also engaged in the importation of general merchandise. Italians and Germans are about evenly established in the jobbing trade and they are the only ones who are at interior trading points as well as at Guayaquil. The Italians, however, are more numerous in retail business. The English are well represented. The cocoa trade is the basis of the French firms and several Spanish houses are also represented.

A compact Chinese commercial circle whose members do their own importing has a profitable share in the retail trade of Guayaquil and is showing a tendency to spread out through the country in spite of native opposition. At Quito business men have protested against the Chinese opening stores and at some of the smaller cities their places have been attacked by mobs. Ecuador has a rigid Chinese exclusion act and the local merchants claim that the Chinese who are trying to open business in the interior have got into the country surreptitiously instead of being members of the Guayaquil colony who were established in business before the exclusion act was passed. Notwithstanding the opposition which their presence causes the Chinese mercantile colony is to be viewed as a permanent and an influential one. Turkish subjects, Syrians, are also making their entrance into the trade of the country in spite of opposition.

AMERICAN REPRESENTATION.

American interests are fairly well established. The Guayaquil and Quito Railway, which is its own purchasing agent, is naturally the largest single buyer of the manufactured products of the United States. New York leather interests, which are the principal buyers of hides, in order to facilitate their business have established a trading company which imports and sells general merchandise. Its headquarters are in Guayaquil, with branches in Quito and other towns in the interior, Americans are owners or partners in several Guayaquil mercantile houses and the members of many of the native firms are frequent visitors to the United States, so that it can not be said there is a lack of knowledge of American goods. On the contrary the commercial communication is close.

As to the means of increasing trade it may be said that while circulars and catalogues do some good, samples, exhibits of the actual articles, demonstration, and personal solicitation by commercial travelers who understand the requirements of Spanish-American

people and the business methods will do much more good. Guayaquil by through steamer schedule is ten or eleven days distant from New York and also from New Orleans. Quito by the railway is two days distant from Guayaquil, and the trip there affords the means of learning the commercial wants of the inhabitants of the inter-Andean plateaus and also of those in the Oriente region which stretches from the slopes of the Eastern Cordilleras through the fertile valleys that are watered by the tributaries of the Amazon. The best time for visiting the country is the healthy season, comparatively speaking, at Guayaquil, which is from June to December. The coolest and most pleasant months on the coast are June and July.

NATIONAL EXPOSITION—CHAMBERS OF COMMERCE.

Opportunity for the exhibit of actual goods and the working demonstration of their utility is offered by the national exposition which opens at Quito in August, 1909. This should prove an especially good chance for making known American farm tools, such as plows and the simpler implements. Information regarding the conditions and the details of the Ecuador National Exposition can be obtained later—when the plans are further advanced—through the Bureau of Manufactures.

Valuable means of information, especially in regard to the finances, export commerce, and the resources of Ecuador are the Chambers of Commerce of Guayaquil and Quito, respectively. The Guayaquil organization has been in existence for several years. Its annual reports, containing a full review of the trade movements, are published in English. The Quito Chamber has recently been organized and is the mouthpiece of the commerce of the capital. One of its objects is to secure the establishment of a customs-house at Quito. This is looked upon as a natural result of the construction of the railway. Other aims are to stimulate the agricultural development of the interior and to foster direct export and import trade. Its secretary may be addressed in English. (Lists of the members of the Guayaquil and the Quito Chambers of Commerce are filed with the Bureau of Manufactures.)

CONCLUSION.

In concluding this review of the commercial conditions in Ecuador with a statement of the stable financial system and the extent to which foreign interests are identified with the trade, I can only express the belief that if the abundant natural resources are developed, as they may be, the foreign trade will be increased proportionately. American enterprise, by building the railway, has opened up the heart of the country and added to the area whose products may be

marketed abroad. The accumulated capital of the Guayaquil business community can find profitable employment in developing and marketing these products and the commerce with all countries will be rendered more extensive and more profitable by placing Guayaquil on the modern sanitary basis of other leading ports.

The geographical proximity of the United States, its position as a buyer of Ecuador's products, and its function in supplying the manufactured and other articles that are demanded by the Ecuador market indicate that the present intimate commercial relations between the two countries will become closer. The Panama trade influence is already felt and this offers the opportunity for cooperation in so important a matter as international sanitation.

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